

REMARKS

Applicant thanks the Examiner for the very thorough consideration given the present application.

Claims 1-5 are now present in this application. Claim 1 is independent.

Reconsideration of this application is respectfully requested.

Rejection Under 35 U.S.C. §102

Claims 1 and 3-5 stand rejected under 35 U.S.C. §102(a, e) as being anticipated by U.S. Patent Application Publication 2002/0074549 to Park (hereinafter, "Park '549"). This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

A prior art reference anticipates the subject of a claim when the reference discloses every feature of the claimed invention, either explicitly or inherently (see, In re Paulsen, 30 F.3d 1475, 1478, 1479, 31 USPQ2d 1671, 1675 (Fed. Cir. 1994), In re Spada, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990), Hazani v. Int'l Trade Comm'n, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed. Cir. 1997) and RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984).

"Anticipation" of a patented method claim occurs if all of the steps of the claim, in the recited combination of steps and otherwise considering the claim as a whole, are found within a

single pertinent "prior art" reference of the type defined in 35 U.S.C. §102. *RCA Corp. v. Applied Digital Data Systems, Inc.*, 730 F.2d 1440, 1444 [221 USPQ 385, 387-388] (Fed. Cir.), cert. dismissed, 468 U.S. 1228, (1984). Cited in Halliburton Co. v. Western Co. of North America (DC W Okla) 10 USPQ2d 1973 (11/3/1988).

Applicant respectfully submits that the Office Action does not make out a *prima facie* case that Park '549 discloses "selectively removing the inorganic insulating material, using at least a portion of the patterned organic insulating layer as a mask to define contact holes for the TFT, the gate pad and the data pad," as recited.

Applicant has read the Park '549 reference and cannot find any such method being disclosed in Park '549. Park '549 uses a number of masks to form his device but Applicant cannot find where Park '549 discloses using at least a portion of the patterned organic insulating layer as a mask to define contact holes for the TFT, the gate pad and the data pad, as recited.

The Office Action indicates that, in paragraph 166, Park '549 clearly teaches removing the inorganic insulating layer 70 as well as removing a portion of gate insulating layer 40 corresponding to gate pad 24 using at least a portion of the patterned photoresist layer PR, referencing Figs. 32A and 33A and paragraph 166.

Applicant respectfully submits that the Office Action is not addressing what is in issue, i.e., the language of claim 1, which recites a combination of features including using a portion of the patterned organic insulating layer to define contact holes. Applicant respectfully submits that there is a big difference between using a patterned photoresist to define contact holes, as recited, and

using a patterned photoresist to etch already defined contact holes, which is what Park '159 appears to disclose.

Applicant uses its patterned photoresist to define the contact holes whereas Park '159 uses a separate mask to do so, and then uses the photoresist to etch the already defined contact holes that were defined using a separate photomask.

Accordingly, Park '159 does not anticipate claim 1, or any of rejected dependent claims 3-5, all of which recite the features of claim 1.

Applicant respectfully submits that the rejection is improper and should be withdrawn.

Rejections under 35 U.S.C. §103

Claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Published Patent Application No. 2001/0074394 (hereinafter, "Park '394") in view of Park '549. This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

Park '394 fails to disclose recites a combination of features including using a portion of the patterned organic insulating layer to define contact holes. Applicant respectfully submits that there is a big difference between using a patterned photoresist to define contact holes, as recited, and using a patterned photoresist to etch already defined contact holes, which is what Park '159 appears to disclose.

Applicant uses its patterned photoresist to define the contact holes whereas Park '394 uses a separate mask to do so, and then uses the photoresist to etch the already defined contact holes that were defined using a separate photomask.

Accordingly, Park '394 fails to disclose this positively claimed feature of claim 2, which depends from claim 1 and, therefore recites this feature of using a patterned photoresist to define the contact holes.

Park '394 also differs from the claimed invention by failing to use a diffracting mask to form the patterned organic insulating layer.

To remedy this admitted deficiency, the Office Action alleges that it would be obvious to use a diffracting mask to pattern the photoresist in the process of Park '394, the motivation to do this being based on the teaching in Park '549 that diffracting masks are desirable for producing a multi-thickness patterned photoresist and because Park '394 requires a multi-thickness patterned photoresist.

Applicant notes that the Office action does not point out where Park '549 teaches that diffracting masks are desirable to produce a multi-thickness photoresist, and Applicant has not found such a teaching in Park '549.

In this regard, the Office Action concludes, without presenting any objective factual evidence in support of the conclusion, that "it is self evident from the disclosure of Park '549 that diffracting masks are used to produce multi-thickness photoresist layers using a single exposure step." Applicant respectfully disagrees, especially in view of the fact that Park '549 explicitly discloses using first, second, third and fourth masks throughout its specification. Moreover, in

paragraph [0086], Park '549 discloses exposing the photoresist film to light "using identical or different masks" (plural number) per region.

Regarding using a diffracting mask, Park '549 discloses, in paragraphs [0163] to [0164] is that such a mask is used to reduce the amount of light applied to the portions of the photoresist film with underlying metal layers.

Park '394 appears to use a non-diffractive light mask to form different thickness photoresist sections, and discloses no need to use a diffractive mask, and discloses no problem such as that addressed by Park '495 that was addressed by using a diffractive mask.

A showing of a suggestion, teaching, or motivation to combine the prior art references, which is an "essential evidentiary component of an obviousness holding." C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998), must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not "evidence." See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999).

Applicant respectfully submits that the broad, conclusory statement that Park '549 discloses using diffracting mask to form a photoresist layer of different thicknesses does not constitute evidence of an incentive for one of ordinary skill in the art to go to the trouble and expense of providing yet another mask (a diffractive mask) to Park '394 to achieve what Park '394 already achieves using its existing mask.

Furthermore, neither applied reference discloses using a patterned photoresist to define contact holes, as recited, so even if these references were properly combined, which they are not, for reasons stated above, they would not result in, or render obvious, the claimed invention.

Accordingly, the Office Action does not make out a *prima facie* case of obviousness of the claimed invention based on the applied references. Thus, the rejection of claim 2 is improper and should be withdrawn.

Additional Cited References

Since the remaining references cited by the Examiner have not been utilized to reject the claims, but have merely been cited to show the state of the art, no comment need be made with respect thereto.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Robert J. Webster, Registration No. 46,472, at (703) 205-8000, in the Washington, D.C. area.

Application No.: 10/621,327
Art Unit 2822

Attorney Docket No. 2658-0307P
Reply to September 2, 2004 Office Action
Page 8

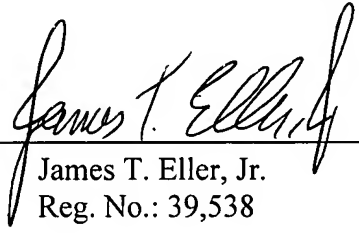
Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By: _____


James T. Eller, Jr.
Reg. No.: 39,538

JTE/RJW:kss/gf 

P.O. Box 747
Falls Church, Virginia 22040-0747
Telephone: (703) 205-8000